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EXAMINER	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/767,593	CHRON ET AL.	
	Examiner	Art Unit	
	SHIRLEY X. ZHANG	4121	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *03 January 2008*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-13,16-22 and 24-26* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-13, 16-22 and 24-26* is/are rejected.

7)☒ Claim(s) *1-13,16-22 and 24-26* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *03 January 2008* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

This final office action is responsive to the amendments and arguments filed on 01/032008 in reply to examiner's office action mailed on 10/03/2007.

Claims 14-15 and 23 have been cancelled;

Claims 24-27 are newly added;

Claims 1-13, 16-22 and 24-27 are now pending;

Response to Arguments

Applicant's arguments and amendments filed on January 3, 2008 have been carefully considered but they are not deemed fully persuasive.

Applicant's arguments are deemed moot in view of the following new grounds of rejection as explained here below, necessitated by Applicant's substantial amendments to the claims which significantly affected the scope thereof, i.e., by incorporating the limitations of claims 14 and 15 into independent claim 1, amending claim 12, as well as the cancellation of claims 14 and 15, the amendments have changed the scope of dependent claims 2-11, 13 and 16-22, and will require further search and consideration.

Accordingly, THIS ACTION IS MADE FINAL. See MPEP 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

1. **Objections to the drawings and abstract** are withdrawn after a careful review of applicant's amendments to the drawings;

2. **Section 102(b) rejections of claims 1-8, 10-13, 16-18 and 23 are maintained.**

Regarding claims 1-8, 10-13, 16-18 and 23, applicant argues that the claim element "a client identifier" that is included in both a request for storage and a response from said store computer is neither taught by the prior art references "The Mirage NFS Router", a technical report by Baker, nor "NAS Switch: A Novel CIFS Server Virtualization" by Katsurashima, or IETF RFC 1094, "Network File System Protocol Specification, Version 2.0", nor RFC 791 "Internet Protocol".

However, the examiner disagrees with the applicant's argument and maintains the rejections for the following reasons.

First of all, the newly added claim element "a client identifier" was not present in the original application disclosure, raising an issue of new matter under 35 U.S.C. 112, first paragraph, see MPEP 706.03(o).

Secondly, the newly added claim element of "a client identifier" that is included in a request for storage, and a response from said store computers is disclosed in the newly introduced prior art reference U.S. patent application publication 2002/0120763 to Miloushev et al., hereinafter referred to as "Miloushev".

Miloushev discloses in Fig. 3-5 and [0136] that the file switch does not handle transactions internally but, instead, examines the requests such as 205, optionally modifies request headers such as 200, and forwards the message to a file server. Because of this, the file switch preferably **does not wait to receive all frames of a message such as 205 before forwarding it to the server.** This allows the file switch to avoid introducing unacceptable latency on multi-frame file protocol transactions, such as 208.

One of ordinary skill in the art of IP networking can reasonably derived from Miloushev's disclosure above that each frame 201, 202, 203 and 204 of the message 205

carries the same source IP address in the IP header, where the source IP address identifies the client making the write request 205, and therefore is a client identifier. It can be further derived that the response from the file server for the write request carries the same client IP address in the destination IP address field of its IP header, i.e., the response includes said client identifier.

It would have been obvious for one of ordinary skill in the art to modify Baker's NFS router with Miloushev's teaching such that both a request for storage and its corresponding response include the client's IP address as a client identifier. One would have been motivated to combine Baker and Miloushev at the time of the invention by the fact that both Baker's NFS router and Miloushev's file switch are about ways to introduce an intermediate, transparent node into a network of file servers to facilitate the scaling of a storage network. The two systems overlap in a significant way, with Miloushev's disclosure being more extensive and offering more features. Therefore, the combination would have yielded a predictable result with reasonable expectation of success.

Finally, examiner would like to point out that Miloushev's disclosure alone also covers all elements of claims 1-8, 10-13 and 16-18 and 23 under 35 U.S.C. 102(b).

3. **Section 103 rejections of claims 9 and 19-22** are maintained for the same reason presented above regarding the section 102 rejections of claim 1 and 12 because the claims are similarly amended.

Specification

4. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required.

Claims 1 and 12 recite the element "a client identifier" that is not described in the specification.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

5. **Claims 1-13, 16-22 and 24-26** are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

The amended claims 1 and 12 recite the element "a client identifier" that was not included in the original application disclosure and therefore raises an issue of new matter, see MPEP 706.03(o).

Claims 2-11 and 24-25 are dependent on claim 1 and inherit the new matter issue of the independent claim.

Claims 13-22 and 26 are dependent on claim 12 and inherit the new matter issue of the independent claim.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

6. **Claims 1-13, 16-22 and 24-26** are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. patent application publication no. 2002/0120763 to Miloushev et al. (hereinafter "**Miloushev**"), in view of IETF RFC 1094 ("Network File System

Protocol Specification", version 2.0, hereinafter "**RFC 1094**") and IETF RFC 791 ("Internet Protocol", hereinafter "**RFC 791**").

As to claim 1, Miloushev teaches a communications network comprising:

at least one communication virtualizer (Fig. 1 and [0053-0054] disclose a file switch as an intermediate node that switches network protocol traffic);

a plurality of network-attached store computers connected to said communication virtualizer (Fig. 1 shows multiple file servers 101-107 that is connected to the file switch 100),

wherein said plurality of network-attached store computers are configured to appear as a single available network-attached store computer (Fig. 1 and [0061] disclose that the file switch aggregates the namespaces of multiple independent file servers and presents them as a single, unambiguous namespace to network clients); and

at least one client computer connected to said communication virtualizer (Fig. 1 and [0125] disclose that clients request file services by communicating to the file switch 100 using the NFS or CIFS protocols),

wherein said client computer is adapted to send requests for storage to said communication virtualizer (Fig. 1 and [0125] disclose that clients request file services by communicating to the file switch 100 using the NFS or CIFS protocols),

wherein said requests for storage are transmitted as a series of packets, each packet comprising a portion of the request for storage ([0054] discloses that one aspect of the present invention is a network node that switches network protocol traffic by receiving the first network frame of a multiframe file protocol request, examining the file protocol header of that request, determining how or where the remaining frames of the

request are to be forwarded and then forwarding each of those frames as it is received based on this determination)

wherein each packet comprises a packet sequence number ([0125] disclose that clients request file services by communicating to the file switch 100 using the NFS or CIFS protocols that run on top of IP, it is inherent that an IP header contains a fragment offset, which is equivalent to the sequence number recited in the claim, see RFC 1094 and RFC 791 for more information),

wherein said packets comprising a similar request for storage are linked together using a request identifier (as said above that said packets are IP packets, it is then inherent that each IP header includes a sequence number that links multiple fragmented packets of a request together, so the sequence number is equivalent to the request identifier recited in the claim), said packet sequence number (the IP header of a packet inherently contains a fragment offset that identifies a fragment in a fragmented, multi-frame request), and a client identifier,

wherein each response packet from said store computers includes said client identifier(Fig. 3-5 and [0136] that the file switch does not handle transactions internally but, instead, examines the requests such as 205, optionally modifies request headers such as 200, and forwards the message to a file server. Because of this, the file switch preferably **does not wait to receive all frames of a message such as 205 before forwarding it to the server.** This allows the file switch to avoid introducing unacceptable latency on multi-frame file protocol transactions, such as 208. One of ordinary skill in the art of IP networking can reasonably derived from Miloushev's disclosure above that each frame 201, 202, 203 and 204 of the message 205 carries the

same source IP address in the IP header, where the source IP address identifies the client making the write request 205, and therefore is a client identifier. It can be further derived that the response from the file server for the write request carries the same client IP address in the destination IP address field of its IP header, i.e., the response includes said client identifier),

and wherein each request for storage comprises a unique request identifier that is shared among said packets comprising said similar request (see the reasoning above).

As to claim 2, Miloushev teaches the communications network of claim 1, further comprising an internal network of connection nodes connecting said communication virtualizer with said network-attached store computers (Fig. 1 and [0124] discloses that the file switch connects to a file server network through connections 110, 114 and other similar connections).

As to claim 3, Miloushev teaches the communications network of claim 1, further comprising a plurality of external network connections for facilitating a transfer of requests sent by said client computer to said communication virtualizer (Fig. 1 and [0124] disclose that the file switch connects to the client network 111 through connection 109).

As to claim 4, Miloushev teaches the communications network of claim 1, further comprising a plurality of external connection paths for facilitating direct communication between said network-attached store computers and said client computer (Fig. 1 and [0125] disclose that the presence of file switch 100 is thereby preferably transparent to both the clients and the servers, therefore it facilitates direct communication between the network file servers and the clients).

As to claim 5, Miloushev teaches the communications network of claim 1, further comprising an Ethernet networking hardware and medium access protocol for facilitating communication within said communication network ([0122] discloses that the file switch is preferably equipped with multiple high-speed network interfaces, such as gigabit or higher Ethernet interfaces).

As to claim 6, Miloushev teaches the communications network of claim 1, further comprising a Transmission Control Protocol / Internet Protocol suite for facilitating communication between said network-attached store computers and said client computer [0133] discloses that the file switch contains a TCP protocol stack).

As to claim 7, Miloushev teaches the communications network of claim 1, further comprising a storage access protocol for facilitating communication between a storage component within said communications network and remaining components within said communications network ([0123] discloses that the file switch preferably supports multiple industry standard network file protocols, such as NFS and CIFS).

As to claim 8, Miloushev teaches the communications network of claim 7, further comprising a storage access protocol that comprises a Network File System protocol ([0123] discloses that the file switch preferably supports multiple industry standard network file protocols, such as NFS and CIFS).

As to claim 9, Miloushev teaches the communications network of claim 7 wherein said network further comprises a storage access protocol comprising a Common Internet File System (CIFS) protocol ([0123] discloses that the file switch preferably supports multiple industry standard network file protocols, such as NFS and CIFS).

As to claim 10, Miloushev teaches the communications network of claim 1, wherein said communication virtualizer comprises a network router ([0133] discloses that the typical operation of the file switch involves receiving file protocol requests, such as login, tree connect/mount, file open, file read/write, etc., from clients 112 and 113 and forwarding, or switching these requests to one or more of the file servers 101 through 107, therefore the file switch has the function of a network router).

As to claim 11, Miloushev teaches the communications network of claim 1, further comprising a communication virtualizer file switch connected to a client computer and a server computer for sending requests from said client computer to said network-attached store and from said network-attached store back to said client computer (Fig. 5 and [0133] disclose that the file switch forwards client requests to the file servers; [0134] discloses that the file switch sends responses from the server back to the client).

As to claim 12, Miloushev teaches a method of communication over a communications network, said method comprising:

sending requests for storage originated by at least one client computer over said communications network;

receiving said requests for storage in at least one communication virtualizer; and

transmitting the received requests for storage to a plurality of network-attached store computers connected to said communication virtualizer ([0133] discloses that the typical operation of the file switch involves receiving file protocol requests, such as login, tree connect/mount, file open, file read/write, etc., from clients 112 and 113 and forwarding, or switching these requests to one or more of the file servers 101 through 107)

wherein said plurality of network-attached store computers are configured to appear as a single network-attached store computer (Fig. 1 and [0061] disclose that the file switch aggregates the namespaces of multiple independent file servers and presents them as a single, unambiguous namespace to network clients).

wherein said requests for storage are transmitted as a series of packets, each packet comprising a portion of the request for storage ([0054] discloses that one aspect of the present invention is a network node that switches network protocol traffic by receiving the first network frame of a multiframe file protocol request, examining the file protocol header of that request, determining how or where the remaining frames of the request are to be forwarded and then forwarding each of those frames as it is received based on this determination)

wherein each packet comprises a packet sequence number ([0125] disclose that clients request file services by communicating to the file switch 100 using the NFS or CIFS protocols that run on top of IP, it is inherent that an IP header contains a fragment offset, which is equivalent to the sequence number recited in the claim, see RFC 1094 and RFC 791 for more information),

wherein said packets comprising a similar request for storage are linked together using a request identifier (as said above that said packets are IP packets, it is then inherent that each IP header includes a sequence number that links multiple fragmented packets of a request together, so the sequence number is equivalent to the request identifier recited in the claim), said packet sequence number (the IP header of a packet inherently contains a fragment offset that identifies a fragment in a fragmented, multi-frame request), and a client identifier,

wherein each response packet from said store computers includes said client identifier(Fig. 3-5 and [0136] that the file switch does not handle transactions internally but, instead, examines the requests such as 205, optionally modifies request headers such as 200, and forwards the message to a file server. Because of this, the file switch preferably **does not wait to receive all frames of a message such as 205 before forwarding it to the server.** This allows the file switch to avoid introducing unacceptable latency on multi-frame file protocol transactions, such as 208.

One of ordinary skill in the art of IP networking can reasonably derived from Miloushev's disclosure above that each frame 201, 202, 203 and 204 of the message 205 carries the same source IP address in the IP header, where the source IP address identifies the client making the write request 205, and therefore is a client identifier. It can be further derived that the response from the file server for the write request carries the same client IP address in the destination IP address field of its IP header, i.e., the response includes said client identifier),

and wherein each request for storage comprises a unique request identifier that is shared among said packets comprising said similar request (see above),

transmitting, by said store computers, response packets to said communication virtualizer, wherein each of said response packets include said client identifier ([0134] discloses that the file switch sends responses from the server back to the client; the same reason as presented above regarding using client IP address as the client identifier applies here).

As to claim 13, Miloushev teaches the method of claim 12, wherein said communication virtualizer, upon receiving requests from said client computer, transmits

said requests for storage to a chosen network-attached store computer based on a capability of said chosen network-attached store computer to properly process said request for storage ([0128] discloses that file switch can be divided into three broad categories: transaction handling (incl. transaction switching and transaction aggregation), file system aggregation (incl. aggregating file system objects and file data), and switch aggregation which includes various mechanisms for combining multiple file switches together (incl., load balancing, configuration sharing, failover and management aggregation).

As to claim 16, Miloushev teaches the method of claim 12, wherein said network-attached store computer is configured for:

receiving said requests for storage from said communication virtualizer ([0134] discloses that the TCP protocol stack on the server receives frames 201 through 204 as they arrive);

processing said request for storage ([0134] discloses that the server waits until it has received the whole message 205 and then interprets the contents of the header 200, and executes the required operation, in this case a file write, by writing the data payload to the proper file);

creating a corresponding response to said request for storage and sending said corresponding response to said communication virtualizer ([0134] discloses that upon completion, the server forms a response header 207 indicating the results of the requested operation).

packetizing said corresponding response (it is inherent in IP network to packetize data);

sending said corresponding response to said communication virtualizer ([0134] discloses that the TCP protocol stack forms a network frame 206 containing the header 207 and sends it to the client).

As to claim 17, Miloushev teaches the method of claim 16, wherein said communication virtualizer is configured for receiving said corresponding response from said network-attached store computer; determining a chosen client computer to which said corresponding response should be routed to; and routing said corresponding response to a chosen client computer ([0144-0145] discloses that the file switch receives responses from the file server, processes them and then sends them to the client).

As to claim 18, Miloushev teaches the method of claim 17, wherein said chosen client computer is configured for receiving said corresponding response from said communication virtualizer ([0144] discloses that the switch then examines the transaction reply header 400 and determines how to modify that header so that the client on connection 109 would accept the modified result as a valid response to the original request 205, which implies that the clinet is configured for receiving responses from the file switch);

de-packetizing said corresponding response (it is inherent in TCP/IP network); and

routing said corresponding response to an initiating application ([0123] discloses that the file switch preferably supports multiple industry standard network file protocols, such as NFS and CIFS, which implies that there must be a NFS or CIFS application on the client to receive and process responses to the requests).

As to claim 19, Miloushev teaches the method of claim 15, wherein said packets are categorized from a zeroth (0th) packet to an ith packet ([0123] discloses that the file switch preferably supports multiple industry standard network file protocols, such as NFS and CIFS, which inherent implies that the requests are sent using IP; RFC 791 discloses the fragmentation technique used by Internet Protocol (IP) for data payload that's bigger than what the physical layer medium can support)

As to claim 20, Miloushev teaches the method of claim 19, wherein said communication virtualizer determines which network-attached store computer to transmit said request for storage to by examining said zeroth packet in said request ([0137] discloses that upon receipt of the first frame 201, which contains the request header 200, the switch 100 recognizes that this frame signifies the beginning of a new message, examines the header 200 and decides to which of the file servers to forward the whole message).

As to claim 21, the Miloushev teaches the method of claim 19, wherein said client computer sends standard Ethernet packets to said communication virtualizer (0122] discloses that the file switch is preferably equipped with multiple high-speed network interfaces, such as gigabit or higher Ethernet interfaces).

Miloushev does not specifically disclose but it is inherent in RFC 791 that the communication virtualizer combines a plurality of standard Ethernet packets comprising a single request for storage into a single packet comprising the request (RFC 791, Section 2.3 “Function Description” discloses that the recipient of fragmented IP packets re-assembles the fragmented packets into a single packet; In other words, the communication virtualizer’s build-in IP protocol combines a series of Ethernet packets

comprising a single request into a single packet; the communication virtualizer's build-in IP protocol further forwards the combined packet to the network-attached store computer as a single Ethernet packet if the physical medium connecting the said virtualizer and the NAS computer supports larger Maximum Transmission Unit (MTU), for instance, the MTU is 9000 bytes for Gigabit Ethernet.);

As to claim 22, Miloushev teaches the method of claim 21.

Miloushev further teaches that said network-attached store computer sends a standard Ethernet packet to said communication virtualizer in reply to a client computer's request (0122] discloses that the file switch is preferably equipped with multiple high-speed network interfaces, such as gigabit or higher Ethernet interfaces);

Miloushev does not explicitly disclose but it is inherent in RFC 791 that said communication virtualizer dividing said standard Ethernet packet into a plurality of standard Ethernet packets to send to said client computer as a response comprising multiple standard Ethernet packets (RFC 791, Section 2.3 "Function Description" discloses that IP employs the fragmentation technique that segments large packets into a series of smaller packets of a size that the underlying physical medium supports, as each type of physical media has it own Maximum Transmission Unit (MTU) requirement; In other words, if the communication virtualizer receives from the network attached store computer as a response a single packet of large size, e.g., a jumbo Gigabit Ethernet packet of 9000 bytes, the IP protocol built into the communication virtualizer will divide said large packet into a plurality of standard 1500-byte Ethernet packets that is acceptable to the regular 100Mps Ethernet connecting the said virtualizer to client computers).

As to claim 24, Miloushev teaches the communications network according to claim 1, wherein said communication virtualizer is adapted to translate a first protocol of said requests for storage to a second protocol different from said first protocol ([0068] discloses an aspect of the invention which essentially is to translate a first protocol of requests from the client into a second protocol and forwards the translated request to the file server).

As to claim 25, Miloushev teaches the communications network according to claim 1, wherein said client computer sends standard Ethernet packets to said communication virtualizer (0122] discloses that the file switch is preferably equipped with multiple high-speed network interfaces, such as gigabit or higher Ethernet interfaces).

Miloushev does not specifically disclose but it is inherent in internet protocol (IP) that the receiving device combines a plurality of standard, fragmented Ethernet packets comprising a single request for storage into a single packet comprising the request (RFC 791, Section 2.3 "Function Description" discloses that the recipient of fragmented IP packets re-assembles the fragmented packets into a single packet; In other words, the communication virtualizer's build-in IP protocol combines a series of Ethernet packets comprising a single request into a single packet; the communication virtualizer's build-in IP protocol further forwards the combined packet to the network-attached store computer as a single Ethernet packet if the physical medium connecting the said virtualizer and the NAS computer supports larger Maximum Transmission Unit (MTU), for instance, the MTU is 9000 bytes for Gigabit Ethernet.);

As to claim 26, Miloushev teaches the method according to claim 12, The communications network according to claim 1, wherein said communication virtualizer is adapted to translate a first protocol of said requests for storage to a second protocol different from said first protocol ([0068] discloses one aspect of the invention which essentially is to translate a first protocol of requests from the client into a second protocol and forwards the translated request to the file server).

Action is Final

9. **THIS ACTION IS FINAL**. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to SHIRLEY X. ZHANG whose telephone number is (571)270-5012. The examiner can normally be reached on Monday through Friday 7:30am - 5:00pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Vaughn can be reached on (571) 272-3922. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/S. X. Z./
Examiner, Art Unit 2144
02/26/2008

/William C. Vaughn, Jr./
Supervisory Patent Examiner, Art Unit 2144